



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/995,037

11/26/2001

Jeffrey R. Thomas

ITWO:0023

9675

7590 02/27/2007
Ralph A. Graham
Fletcher, Yoder & Van Someren
P.O. Box 692289
Houston, TX 77269-2289

EXAMINER

IP, SIKYIN

ART UNIT

PAPER NUMBER

1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/995,037

Applicant(s)

THOMAS ET AL.

Examiner

Sikyin Ip

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/21/06;6/13/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,47,51-55,57-62,64-87 and 91-96 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,47,51-55,57-62,64-87 and 91-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1742

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6, 8, 47, 51-55, 68-78, 87, and 91-94 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-42 of U.S. Patent No. 6727483. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed portable induction components are overlapped by portable induction components.

Claims 1-6, 8, 47, 51-55, 68-78, 87, and 91-94 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 7015439. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed portable induction components are overlapped by portable induction components.

Claims 1-6, 8, 47, 51-55, 68-78, 87, and 91-94 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over

Art Unit: 1742

claims 1-7, 17-20, and 24-35 of copending Application No. 11/144898. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed portable induction components are overlapped by portable induction components.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 8, 47, 51-55, 68-78, 87, and 91-94 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The wordings "coupleable" and/or "operable" in claims 1, 4, 5, 8, 47, 51, 54, 57, 60, 61, 64, 68, 71, 72, 75, 79, 82, 83, 86, 87, 91, and 94 fail to positively state the relationship of disclosed members. For example, claim 1, lines 3-4, "a power source electrically coupleable to a fluid-cooled induction heating cable and operable to produce a varying magnetic field", the wordings "coupleable" and "operable" do not positively require "a power source electrically coupled to a fluid-cooled induction heating cable and operable to produce a varying magnetic field".

Art Unit: 1742

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 47, 51-55, 68-78, and 95 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 3403240 to Henderson in view of USP 4058696 to Antier et al and further teaching of USP 5198053 to Duncan.

The Henderson in figures 1-4 and col. 2, line 23 - col 4, line 33 discloses the features including the claimed portable induction unit with cooling. Cooling water is supplied to induction heating element (22) (col. 3, lines 65-71 and Figure 8 and paragraph bridging col. 2-3). Henderson discloses cooling water supply is controlled by a solenoid which is actuated by power supply motor-generator set. The solenoid (122), control box (131), and check valve (128) read on the claimed "flow switch" (col. 3, lines 57-75). All have same function to control induction heating element temperature. Henderson does not disclose a portable power inverter and programmable power source controller. Antier in col. 2, lines 5-44 discloses a portable power inverter which has benefit as set forth in col. 2, lines 5-11. Duncan in col. 7, lines 24-62 that using

Art Unit: 1742

Lebtech Notebook Proportional –Integral-Derivative (PID) algorithm or any other control program with personal computer to control induction unit to produce time-temperature curve is commercially available. Programming power controlled unit is well known in the induction art for various heating. Therefore, it is contemplated within ambit of ordinary skill artisan to automate a manual control device of Henderson when technology is available to improve product quality. With respect to steps such pre-heating, post-heating, and stress relieve heating which can be done by induction heating system of Henderson. Moreover, it is well settled that a claim drawn to apparatus must distinguish over prior art in terms of structure. *Ex parte Forsyth and Hancher*, 151 USPQ 55, 55.

Claims 1-6, 8, 57-62, 64-66, 79-87, 91-94, and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims above, and further in view of USP 5874713 to Cydzik et al.

The above said references disclose the features substantially as claimed as set forth in the rejection above except for recycling a cooling fluid. However, Cydzik in paragraph bridging col. 6 and 7 teaches recirculating fluids for cooling a coil in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to recirculate cooling fluid like car radiator when fresh cooling fluid is not immediately available. *In re Venner*, 120 USPQ 193 (CCPA 1958), *In re LaVerne, et al.*, 108 USPQ 335, and *In re Aller, et al.*, 105 USPQ 233.

Response to Arguments

Applicant's arguments filed February 21, 2006 have been fully considered but they are not persuasive.

Applicants' argument in pages 15-16 of instant remarks is noted. But, applicants' argument is found inconsistent with instant Figure 1, members 62, 124, 114 and 56 which are same as elements (16, 18) and (12, 14) as disclosed by Henderson. Moreover, coolant of Henderson induction heating system is traveled only one path in (16, 12) and one path out (14, 18).

Applicants' argument with respect to the "flow switch" is noted. But, Henderson discloses cooling water supply is controlled by a solenoid which is actuated by power supply motor-generator set. The solenoid (122), control box (131), and check valve (128) read on the claimed "flow switch" (col. 3, lines 57-75). All have same function to control induction heating element temperature.

Applicants' argument with respect to instant claims 68 and 87 is noted. Instant claims 68 and 87 require a power source to heat a workpiece, a controller to control heating temperature, and a cart to support power source and controller. Applicants' attention is directed to Henderson that Figure 1 and col. 3, lines 67-68 teach motor-generator set power supply, off-on control switch (132) and Figure 3 shows portable induction unit on caster wheels (138) (col. 4, lines 1-9). Duncan in col. 7, lines 24-62 discloses Lebtch Notebook Proportional -Integral-Derivative (PID) algorithm or any other control program with personal computer to control induction unit to produce time-temperature curve is commercially available.

Art Unit: 1742

Applicants' argument with respect to PC/AT computer that Duncan uses is noted.

But, notebook/laptop computers are PC/AT compatible.

Applicants' argument in page 17 of instant remarks is noted. But, PC/AT computers do not exclude notebook/laptop computers.

Conclusion

Applicant is reminded that when amendment and/or revision is required, applicant should therefore provide a concise explanation and support with page and line number in the specification for any amendments made to the disclosure. See 37 C.F.R. Part §41.37 (c)(1)(v).


Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
February 5, 2007